Remarks

In view of the above amendments and the following remarks, reconsideration and further examination are requested.

Claims 1, 3, 5, 7, 9-11, 13 and 15 have been rejected under 35 U.S.C. §102(b) as being anticipated by Dolby (US 4,024,344).

Claims 2, 4, 6, 8, 12, 14 and 16 have been indicated as containing allowable subject matter. The Applicants would like to thank the Examiner for this indication of allowable subject matter.

Claims 1, 3, 5 and 7 have been amended so as to further distinguish the present invention from the reference relied upon in the above-mentioned rejection.

In addition, claims 1-16 have been amended to make a number of editorial revisions. These revisions have been made to place the claims in better U.S. form. None of these amendments have been made to narrow the scope of protection of the claims, nor to address issues related to patentability and therefore, these amendments should not be construed as limiting the scope of equivalents of the claimed features offered by the Doctrine of Equivalents.

It is submitted that the above-mentioned rejection is inapplicable to the amended claims for the following reasons.

Claim 1 is patentable over Dolby, since claim 1 recites a sound system including an attenuating means for attenuating either a left channel signal or a right channel signal according to an operation on an operating part, and a controlling means for controlling an attenuation of a center channel signal depending on the attenuation of the left channel signal or the right channel signal. Dolby fails to disclose or suggest these features of claim 1.

Dolby discloses a number of different stereo reproduction systems that receive a stereo signal (a left channel signal and a right channel signal), and from the stereo signal, generate a center channel signal. In a first embodiment, the system includes a mixer 13 that combines the left and right channel signals, three variable gain devices 10, 12, 14 that are able to adjust the gains of the left channel signal, the right channel signal, and the combination of the left channel signal and the right channel signal, as the center channel signal, respectively, for output, and a control circuit 15 for controlling the variable gain devices. During operation, the control circuit 15 receives the left and right channel signals and detects when stereo information is absent or

insignificant compared with mono information. When stereo information is present, i.e., in stereo mode, the control circuit 15 maintains the gains of the variable gain devices 10, 12, 14 at their normal levels, whereby the gain of variable gain device 14 is lower than that of variable gain devices 10, 12. However, when stereo information is not significantly present, i.e., in mono mode, the control circuit 15 reduces the gains of the variable gain devices 10, 12 and increases the gain of variable gain device 14. (See column 3, lines 27-43 and Figure 1).

In another embodiment, the system includes a pair of band pass filters 28, 29, three summing amplifiers 22, 23, 26, a pair of voltage controlled amplifiers (VCA) 30, 31 and the control circuit 15 operable to control the VCAs 30, 31. The summing amplifiers 22, 23, 26 output the left, right and center channel signals, respectively. During operation, the control circuit 15 receives the left and right channel signals after they have passed through the band pass filters 28, 29, respectively, and detects when stereo information is either absent or insignificant as compared with mono information. When stereo information is present, i.e., in stereo mode, the control circuit 15 maintains the gains of the VCAs 30, 31 at high levels. However, when stereo information is not significantly present, i.e., in mono mode, the control circuit 15 reduces the gains of the VCAs 30, 31. (See column 4, lines 3-65 and Figure 3).

Based on the two exemplary embodiments of Dolby discussed above, it is apparent that the control circuit 15 bases any variation of gain of the left, right and center channel signals solely on the correlation between the left channel signal and the right channel signal. In other words, the control circuit automatically controls the system depending on its determination of whether or not the left and right channel signals contain stereo information. Further, it is apparent that the control circuit 15 always varies the gain of the left and right channel signals equally. However, claim 1 recites that the attenuating means attenuates either a left channel signal or a right channel signal according to an operation on an operating part. It is clear that the control circuit 15 does not adjust the gain of the left or right channel signal, but both of the signals equally. Also, the gains of the left and right channel signals are adjusted automatically by the control circuit 15 and not based on an operation on a part of the stereo reproduction system. As a result, Dolby fails to disclose or suggest the attenuation means of claim 1.

In addition, claim 1 recites that the controlling means controls the attenuation of a center channel signal depending on the attenuation of the left channel signal or the right channel signal. Again, Dolby discloses that the control circuit 15 controls the gain of the center channel signal

based on the correlation between the left channel signal and the right channel signal and not on an attenuation of the left or right channel signal. Therefore, Dolby necessarily fails to disclose or suggest the controlling means of claim 1. As a result, claim 1 is patentable over Dolby.

Claim 3 is patentable over Dolby, since claim 3 recites a sound system including, in part, an attenuating means for attenuating either a left channel signal or a right channel signal according to an operation on an operating part, and a second adding means for adding at least a portion of the center channel signal to the right or left channel signal not being attenuated. Dolby fails to disclose or suggest these features of claim 3.

As discussed above in support of claim 1, Dolby fails to disclose or suggest the attenuating means. Regarding the second adding means recited in claim 3, it is noted that in all of the embodiments of Dolby, the generated center channel signal is not added to the left or right channel signals. For example, in Figure 1 of Dolby, the center channel signal generated by the mixer 13 only passes through the variable gain amplifier 14 before being output. In Figure 2, the center channel signal is directly outputted from a mixing stage 18 where it is created. Finally, in Figure 3, the center channel signal is directly outputted from the summing amplifier 26. Based on this disclosure of the embodiments of the stereo reproduction systems of Dolby, it is apparent that Dolby fails to disclose or suggest the adding means for adding at least a portion of the center channel signal to the right or left channel signal not being attenuated as recited in claim 3. As a result, claim 3 is patentable over Dolby.

Claim 5 is patentable over Dolby, since claim 5 recites a sound system including an attenuating means for attenuating either front side channel signals or rear side channel signals according to an operation on an operating part, and an adding means for adding the attenuated side channel signals to the side channel signals not being attenuated. These features of claim 5 are not disclosed or suggested by Dolby.

As discussed above, the stereo reproduction systems disclosed in Dolby are only designed to handle a single left channel signal and a single right side channel signal and the control circuit 15 automatically controls the gain of these signals in an identical fashion. The attenuating means recited in claim 5 attenuates either front side channel signals or rear side channel signals according to an operation of an operating part. Dolby fails to disclose or suggest that the control circuit 15 controls the gain of the left and right channel signals based on an

operation on a part of the stereo reproduction system. As a result, Dolby fails to disclose or suggest the attenuation means of claim 5.

Further, the adding means of claim 5 adds the attenuated side channel signals to the side channel signals not being attenuated. Since the control circuit 15 identically controls the gain of the left and right channel signals, the coexistence of attenuated and not attenuated signals is not possible in Dolby. Therefore, Dolby necessarily fails to disclose or suggest an adding means for adding such signals. As a result, claim 5 is patentable over Dolby.

Claim 7 recites a sound system including an attenuating means for attenuating either left side channel signals or right side channel signals according to an operation on an operating part, and an adding means for adding at least a portion of the attenuated side channel signals to the side channel signals not being attenuated. Dolby fails to disclose or suggest these features of claim 7.

As discussed above with regard to claim 5, Dolby only contemplates the use of a single left channel signal and a single right side channel signal and not left side channel signals and right side channel signals. Also, the control circuit 15 automatically controls the gain of the left and right channel signals in an identical fashion. Therefore, it is apparent that Dolby fails to disclose or suggest the attenuating means and the adding means of claim 7 for reasons similar to those set forth above in support of claim 5. As a result, claim 7 is patentable over Dolby.

Because of the above mentioned distinctions, it is believed clear that claims 1-16 are allowable over Dolby. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to modify Dolby or to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 1-16. Therefore, it is submitted that claims 1-16 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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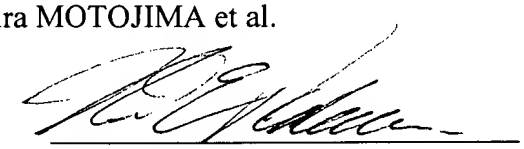
By: 

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